

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C. 20554**

In the Matter of)	
)	
Connect America Fund)	WC Docket No. 10-90
)	
A National Broadband Plan for Our Future)	GN Docket No. 09-51
)	
Establishing Just and Reasonable Rates for Local Exchange Carriers)	WC Docket No. 07-135
)	
High-Cost Universal Service Support)	WC Docket No. 05-337
)	
Developing an Unified Intercarrier Compensation Regime)	CC Docket No. 01-92
)	
Federal-State Joint Board on Universal Service)	CC Docket No. 96-45
)	
Lifeline and Link-Up)	WC Docket No. 03-109

COMMENTS of ADTRAN, Inc.

Stephen L. Goodman
Butzel Long Tighe Patton, PLLC
1747 Pennsylvania Ave, NW, Suite 300
Washington, DC 20006
(202) 454-2851
SGoodman@bltplaw.com

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Table of Contents

Introduction and Summary	4
Measuring Broadband	6
Public Interest Obligations	11
Determining Support	14
Ensuring Accountability.....	16
Mobility Fund	18
Issues Related to Implementation of CAF Phase II	20

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COMMENTS of ADTRAN, Inc.

ADTRAN, Inc. (“ADTRAN”) files these comments in response to the Commission’s Further Notice of Proposed Rulemaking with regard to the repurposing and refinement of the Universal Service Fund to support broadband deployment to currently unserved areas.¹

ADTRAN lauds the Commission for taking the initial, comprehensive steps to resolve the

¹ *Connect America Fund; A National Broadband Plan for Our Future; Establishing Just and reasonable Rates for Local Exchange Carriers; High-Cost Universal Service Support; Developing a Unified Intercarrier Compensation Regime; Federal-State Joint Board on Universal Service; Lifeline and Link-Up; WC Docket Nos. 10-90, 07-135, 05-337, 03-109, CC Docket Nos. 01-92, 96-45, GN Docket No. 09-51, Report and Order and Further Notice of Proposed Rulemaking, FCC 11-161, 76 Federal Register 78384 (December 16, 2011) (hereafter cited as “Order and Further NPRM”).*

longstanding issues related to various subsidy and intercarrier compensation systems. Change was necessary, because the old subsidy and intercarrier compensation rules, based on circuit-switched technologies, did not facilitate the upgrade of the networks to IP-based technologies and failed to explicitly subsidize broadband deployment. While the Commission took great strides forward, some of the details of the transformation were left to the Further Notice of Proposed Rulemaking. ADTRAN addresses herein those issues to which its experience and expertise can meaningfully contribute.

INTRODUCTION AND SUMMARY

ADTRAN, founded in 1986 and headquartered in Huntsville, Alabama, is a leading global manufacturer of networking and communications equipment, with an innovative portfolio of more than 1,700 solutions for use in the last mile of today's telecommunications networks. ADTRAN's equipment is deployed by some of the world's largest service providers, as well as distributed enterprises and small and medium businesses. Importantly for purposes of this proceeding, ADTRAN solutions enable voice, data, video and Internet communications across copper, fiber and wireless network infrastructures. ADTRAN thus brings an expansive perspective to this proceeding, as well as an understanding of the impact of regulation on network operators' investment decisions.

ADTRAN agrees with the requirement that support recipients provide actual broadband capabilities that meet the prescribed parameters – “up to” or “advertised” speeds will not suffice. ADTRAN urges the Commission to rely on the extensive work that industry, academia and others have already undertaken, and are continuing to undertake, to measure broadband performance in a consistent and meaningful manner. ADTRAN believes it would be premature,

and possibly inefficient, to require that “SamKnows-type white boxes” be installed at every fixed broadband consumer location.

ADTRAN also urges the Commission to use restraint in imposing additional requirements on support recipients under the guise of the “public interest.” Additional burdens will add cost, which will reduce the number of currently unserved locations that will obtain broadband. Moreover, extraneous obligations will discourage providers’ participation in the subsidy programs, thereby dampening broadband deployment.

With regard to determining support, ADTRAN urges the Commission to take account of the non-uniformity of costs when adjusting support for providers that partially overlap with unsubsidized competitors. Presumably those competitors “cherry picked” the lowest cost areas to serve. While ADTRAN agrees that the Commission must take steps to ensure accountability, imposing a requirement that every recipient obtain a Letter of Credit for the full amount of the subsidy, along with a penalty, will add unnecessary costs and discourage participation. The Commission can use its current “toolbox” to ensure that subsidy recipients complete the broadband deployment projects.

ADTRAN supports the establishment of a separate Mobility Fund, since fixed and mobile broadband services are largely complementary, not duplicative. ADTRAN also agrees with the Commission’s proposals for robust measurements, including drive tests, to ensure minimum performance throughout the area and over time. At the same time, ADTRAN urges the Commission to adopt more comprehensive performance requirements for mobile broadband performance, as opposed to the minimum requirements proposed in the *Order and Further*

NPRM. Finally, ADTRAN urges the Commission to adopt a uniform term of support for both mobile and fixed broadband deployments.

ADTRAN also agrees with the Commission's proposals for the CAF Phase II support. If the incumbent ETC declines the model-derived support, then a reverse-auction would be an efficient way to award support. ETC designation is an appropriate eligibility requirement, and any ETC that declined model-derived support should still be eligible to participate in the auction. ADTRAN urges the Commission not to adopt "bidding credits" or other similar aid for smaller eligible entities, because any such credits would directly result in fewer unserved locations attaining broadband service – which is the primary goal of the reform of the USF. ADTRAN also suggests that the Commission not lower the broadband performance requirements for these reverse-auction deployments. The Remote Fund, with presumably reduced performance minimums, will serve the truly "hard to reach" areas, but other customers should not have to settle for reduced performance that would deny them the real-time applications the Commission thought essential in setting the original minimum requirements.

MEASURING BROADBAND

ADTRAN concurs with the Commission's decision to require that actual broadband speeds -- not merely "up to," "advertised" or theoretical speeds -- be used when subsidized offerings require minimum capabilities.² Indeed, the Commission cited to ADTRAN's previous

² *Order and Further NPRM* at ¶ 92.

comments in this proceeding when it adopted this standard.³ As the *Order and Further NPRM* recognizes, however, there are numerous issues surrounding how “actual” speeds are determined.

One question raised by the Commission concerns whether there should be a uniform methodology for measuring broadband speeds, and if so, whether it should vary by technology.⁴ ADTRAN urges the Commission to specify uniform parameters for measuring broadband performance so as to eliminate disputes over whether a deployed network meets the minimum requirements. In doing so, the Commission should apply the lessons learned from the extensive efforts that have already been put forth on this subject, while continuing to work with industry and academia on defining a scalable, long term performance measurement methodology.

Since early 2010, the Commission has been working with industry, academia and other groups on a project to measure broadband performance in a consistent and meaningful manner.⁵ ADTRAN has actively participated in these activities, and believes that this work provides lessons that can be applied to the measurement of broadband for purposes of the Connect America Fund (“CAF”) support. For example, comparison of measurement results from M-Lab server locations with results from “on-network” test servers⁶ provides valuable information about the relative effect of core network architectures on broadband performance. At the same time,

³ *Id.* at n. 136.

⁴ *Order and Further NPRM* at ¶ 1014.

⁵ *Consumer Information and Disclosure; Truth-in-Billing and Billing Format; IP-Enabled Services*, Notice of Inquiry, 24 FCC Rcd 11380 (2009).

⁶ *Measuring Broadband America: A Report on Consumer Wireline Broadband Performance in the U.S.*, FCC’s Office of Engineering Technology and Consumer and Governmental Affairs Bureau, August 2011.

the trial project highlighted several issues – such as the volume of test traffic required to implement SamKnows-style testing and the level of effort associated with offline requirements such as validation of volunteers’ service tiers – that must be addressed in any large scale approach to performance measurement.

Of particular concern is the volume of test traffic generated during the performance measurement trial and the potential impact of such traffic on performance measurement results in the types of deployments likely to be subsidized via the CAF. The volume of test-generated traffic per volunteer in the trial⁷ significantly exceeded the average volume for subscriber-generated traffic for similar time periods.⁸ Since network performance can be dependent on loading, the additional load imposed by test traffic can negatively affect performance test results. The effect of test loading may be insignificant when a small percentage of test subjects is measured in a trial that averages results over large geographic regions. However, any attempt to scale up testing to larger sample populations, or to apply the same methodology to small rural regions with sparsely distributed subscriber populations, must consider this loading, both to avoid biasing test results and to avoid the unintended consequence of forcing providers to build excess capacity (at expense that would in turn be subsidized) purely to accommodate test traffic.

ADTRAN believes that the Commission should approach large scale broadband performance verification with an awareness of both the advantages and the potential pitfalls of the test methodology used to date. We also urge the Commission to develop its long term

⁷ *Measuring Broadband America: Technical Appendix*, FCC’s Office of Engineering Technology and Consumer and Governmental Affairs Bureau, August 2011.

⁸ Cisco, *Cisco Visual Networking Index: Usage*, October 25, 2010; Sandvine, *Global Internet Phenomena Spotlight: North America, Fixed Access, Fall 2011*, October 2011.

measurement approach in cooperation with appropriate standards development organizations such as the IETF and the Broadband Forum, and to encourage related work within such organizations where there is a need. This approach has two significant benefits. First, a broad set of technical subject matter experts having the skills and experience necessary to develop a large scale test methodology already participates in the activities of these organizations. Second, working in cooperation with organizations having global scope assures the best chance of establishing a test methodology that is adopted not only in the United States, but worldwide. It is easier for equipment vendors to implement a single solution that applies globally, which in turn facilitates deployment of those features by service providers, furthering the performance measurement goals of the Commission while minimizing the subsidy funds required to support those goals.

ADTRAN also believes that the parameters and methodology used to measure any given service (*e.g.*, fixed broadband access) should be uniform across all technologies used to deliver that service (*e.g.*, DSL, cable, fiber, fixed wireless, or satellite). We concur with the Commission's decision to define performance requirements for fixed broadband access independently of the technology used to deliver that access.⁹ For similar reasons, performance measurement methodology should be defined independent of technology. A properly designed methodology should be applicable to any technology used to deliver a given service, and should allow "apples to apples" comparisons of results without technology bias and without needing to know what technology delivered a given set of results.

⁹ *Order and Further NPRM* at ¶¶ 94, 96 and 98.

While performance measurement methodologies should not be dependent on the broadband access technology, they can be adapted to the performance requirements of different broadband access services. As one obvious example, a methodology that mandates mobility testing for mobile broadband access services would not be appropriate for fixed access services. By the same token, a test methodology that requires large volumes of test traffic may not be appropriate for mobile access services, where relatively low volume caps are common and where radio performance in a cell may be very sensitive to traffic load.

The *Order and Further NPRM* also asks whether fixed broadband funding recipients should be required to install “SamKnows-type white boxes” at consumer locations in order to measure actual speeds in a standardized way.¹⁰ ADTRAN recommends that the Commission avoid committing to such a decision until the requirements associated with a long term test methodology and architecture are better understood. It is possible that alternative approaches may be generated in the standards development process that significantly change, or even eliminate the necessity for, such a component. In addition, ADTRAN is concerned about imposing unnecessary and excessive costs on the broadband service providers. As an initial matter, it would be unfair to saddle recipients with obligations if those costs are not included in the model that determines the level of funding. If the model fails to produce adequate levels of funding, then presumably the service providers would decline the CAF Phase II support (but providers would include all necessary costs in formulating their bids, assuming the Commission then used reverse auctions to award the broadband subsidies). Thus, the costs of ongoing performance measurement will come out of the capped subsidy pool one way or another.

¹⁰ *Order and Further NPRM* at ¶ 1014.

As a result, unnecessary expenditures on any Commission-imposed monitoring requirements would reduce the amount of money that could be used to subsidize build-out to unserved areas – which is the primary goal of the Commission. ADTRAN therefore urges the Commission to allow subsidized broadband service providers to take measurements from a statistically significant and randomly assigned set of customer locations, rather than requiring that a “SamKnows-type white box” be installed at every consumer location.

The *Order and Further NPRM* also asks whether the collected data should be submitted to the Universal Service Administrative Corporation (“USAC”), or whether it would suffice to have the subsidy recipient certify to USAC that its network is satisfying the minimum broadband metrics and retain the results of its own performance measurement to be produced on request in the course of possible future audits. ADTRAN urges the Commission to adopt the latter alternative. Requiring the submission of all of that raw data would be burdensome, would likely overwhelm USAC with far more information than it needs, and would present serious concerns regarding the disclosure of confidential and proprietary information. In other similar contexts, the Commission has determined that certification and retention of underlying data suffices.¹¹

PUBLIC INTEREST OBLIGATIONS

In setting the public interest obligations for the broadband subsidy recipients, the Commission seeks comment on the principle of Section 254(b)(3), that broadband services be offered “at rates that are reasonably comparable to rates charged for similar services in urban

¹¹ E.g., 47 C.F.R. §§ 2.902, 2.906 and 2.938.

areas.”¹² ADTRAN agrees with the Commission’s proposal to adopt a measure of two standard deviations as a safe harbor for determining the reasonable comparability of rates in urban areas with the rates in rural and high cost areas.¹³ The Communications Act imposes a standard of “reasonably comparable,” not a requirement of equivalent (or even comparable) rates.

The Commission should avoid getting enmeshed in detailed rate regulation of broadband services in rural or high cost areas – or indirectly setting rates for broadband in urban areas. Such extensive regulatory oversight of prices could dissuade service providers from deploying broadband, particularly if they believed that even with the CAF subsidies, revenues would be inadequate to cover the deployment and ongoing operational costs. Moreover, while they are imperfect substitutes, mobile broadband and satellite broadband will provide competitive checks on the rates wireline broadband carriers can charge in rural territories. Thus, the two standard deviation measure should suffice to ensure “reasonably comparable” rates.

The Commission also sought comment on additional interconnection requirements that might be imposed on CAF recipients as a public interest obligation.¹⁴ Such interconnection obligations include expanded IP-to-IP voice interconnection, beyond the general framework being considered more broadly,¹⁵ as well as making interconnection points and backhaul capacity

¹² 47 U.S.C. § 254(b)(3).

¹³ *Order and Further NPRM* at ¶¶ 1025-1026.

¹⁴ *Order and Further NPRM* at ¶¶ 1028-1030.

¹⁵ *Order and Further NPRM* at ¶¶ 1335-1398.

available so that unserved high-cost communities could deploy their own broadband networks.¹⁶

ADTRAN urges the Commission not to adopt any such additional, recipient-specific obligations.

Any such additional burdens could discourage participation in the subsidy programs, and thus retard broadband deployment. Moreover, creating recipient-specific burdens would likely create confusion and disputes, particularly where a service provider offers broadband services on both a subsidized and an unsubsidized basis utilizing some common equipment. The Commission should heed the painful lessons from the implementation of the Telecommunications Act of 1996. As the litigation surrounding the “proper” prices for network elements under the Telecommunications Act of 1996 demonstrate, years of delay would likely be engendered by any such additional requirements. Moreover, prices set too low will incent uneconomic investment by new entrants, but any resulting “synthetic competition” would not be sustainable or provide any long-term benefits to consumers.

Likewise, the Commission needs to bear in mind the experiences with mandated remote terminal collocation (with the requirement that incumbent carriers build in extra capacity into their remote terminals), where little, if any of that mandated excess capacity was ever utilized. There is a good chance that a repeat of this mistake would occur if the Commission were to similarly require that “extra” backhaul capacity be deployed by CAF recipients to assure

¹⁶ The Commission also sought comment on the proposal of Public Knowledge and the Benton Foundation that the Commission create a fund for a Technology Opportunities Program in order to assist communities with deploying their own broadband networks. *Order and Further NPRM* at ¶ 1030. To the extent that a community believes it is in its citizens’ best interests to have a subsidized community-owned-and-operated broadband network, it would seem to ADTRAN that it makes more sense to have that community provide the subsidies, rather than trying to subsidize such networks from the limited USF/CAF funds.

adequate capacity for communities to deploy their own networks. If those uneconomic costs are incorporated into the cost models and thus borne by the CAF, there will be less money for deploying broadband to unserved areas. Alternatively, if such uneconomic costs are imposed on potential recipients without providing any source for recovery, it would discourage participation in the subsidy program, which would also reduce broadband deployment.

DETERMINING SUPPORT

The *Order and Further NPRM* raises several questions regarding the details for determining support. Some of these issues concern funding in areas where there is some overlap with an unsubsidized competitor, based on the notion that subsidies should not support broadband in territories where broadband has already largely been deployed without subsidy, thus demonstrating that the rest of that area should likewise support broadband without the need for any subsidy. As an initial matter, the Commission proposes a procedure whereby the Bureau would identify any Eligible Telecommunications Carrier (ETC) areas where there is a significant (75%) overlap with an unsubsidized broadband provider, and then provide the ETC the ability to challenge that determination.¹⁷ In light of acknowledged inaccuracies in the National Broadband Map,¹⁸ ADTRAN agrees that ETCs must have a meaningful opportunity to contest the Wireline Bureau's preliminary determination.

The Commission also seeks comment on whether and how to adjust support where there is a partial overlap by an unsubsidized facilities-based provider of terrestrial fixed voice and

¹⁷ *Order and Further NPRM* at ¶ 1071.

¹⁸ *E.g., Order and Further NPRM* at ¶ 335.

broadband service meeting the minimum performance requirements.¹⁹ ADTRAN cautions the Commission not to adopt a simple, proportionate reduction in support, because it will likely be the case that a competitor chose to “cherry pick” the lowest cost areas to serve. To the extent the Commission relies on a cost model to reduce the support, that model must be sufficiently granular that it can determine the necessary support for the particular areas not served by the competitor, rather than simply assuming that costs are uniform to all customer locations within that territory.

As part of the holistic reform of the Universal Service Fund, the Commission will be represcribing the authorized rate of return, which presumably will reduce the level of support provided to rate-of-return carriers. The Commission asks whether the “savings” from any reduction in the authorized rate of return should be used to establish a new CAF mechanism for rate of return companies that would support new broadband investment. ADTRAN agrees that any such “savings” should be plowed back into the Connect America Fund to foster greater broadband deployment. However, rather than using any such savings to create a “new CAF

¹⁹ *Order and Further NPRM* at ¶ 1076. The Commission should also clarify what it means by its reference to an “unsubsidized competitor.” The text of the *Order and Further NPRM* does not discuss what “subsidies” would qualify such a competitor, although the new definition in Section 54.5 of the Rules seemingly indicates that it is limited to a competitor “that does not receive high-cost support.” It is not clear that the Commission intended to exclude from the category of “subsidized competitors” service providers that received explicit support from other sources, such as the BIP or BTOP programs. Similarly, competitors may have received non-explicit subsidies that supported their broadband deployment, such as “free spectrum” (e.g., the proposal of Frontline Wireless, LLC). Entry by such competitors, even if not subsidized by high-cost support, does not mean that subsidies are not needed to support broadband deployment in these areas.

mechanism” solely for rate-of-return carriers, these funds should be dedicated to broadband deployment more broadly.

ENSURING ACCOUNTABILITY

ADTRAN agrees that the Commission must take steps to ensure that the broadband subsidies are used for their intended purposes. As the Commission’s experiences with the Schools and Libraries Fund -- as well as the TRS fund -- demonstrate, there are a minority of unscrupulous characters that will abuse or defraud these government programs.²⁰ The Commission is thus correct in putting in place measures that would detect and deter fraudulent conduct.²¹ ADTRAN is concerned, however, by some of the proposals insofar as they would impose unnecessary and excessive costs on all recipients. To the extent the Commission is concerned with egregious conduct, then the Commission’s general forfeiture powers or criminal prosecution remain as tools.

On the other hand, requiring all recipients to obtain a Letter of Credit (“LOC”) will impose a not insignificant cost – both in terms of the fees assessed (typically an annual fee of from 1-8% of the amount of the credit),²² as well as the opportunity cost, because the bank normally requires that the client also maintain funds on deposit to cover the amount of the LOC. To the extent these costs are included in the cost model for CAF Phase II, they will reduce the

²⁰ According to a list maintained by USAC, there have been 40 suspensions and 34 debarments by the FCC in connection with the Schools and Libraries Fund.
<http://www.usac.org/sl/about/suspensions-debarments.aspx#list>.

²¹ *Order and Further NPRM* at ¶¶ 1105-1116.

²² *See generally*,
<http://www.investopedia.com/terms/s/standbyletterofcredit.asp#axzz1iikUigxl>.

amount of funds otherwise available for the actual deployment of broadband services. And if this burden is an “unfunded mandate,” then service providers will be discouraged from participating in the subsidy program, thus delaying or curtailing the deployment of broadband to unserved areas.

Moreover, the potential harms are exacerbated, because the Commission also proposes to include a default penalty into the amount of the LOC,²³ thus creating significant risk because the Commission could arbitrarily draw down the LOC – including the “default” payment in excess of the amount of the subsidy – without any prior notice or hearing. The *Order and Further NPRM* recognizes that a full drawdown of the LOC could be a disproportionate penalty when discussing the possibility of non-material non-compliance and/or partial drawdowns,²⁴ but service providers are not likely to gain much comfort from such “safety valves” in light of the Commission’s history of seemingly arbitrary relief from its satellite milestone bond forfeitures or spectrum auction defaults.²⁵ The risk that the LOCs could be used to impose penalties will further discourage participation in the subsidy programs.

²³ *Order and Further NPRM* at ¶ 1108.

²⁴ *Order and Further NPRM* at ¶ 1109.

²⁵ Compare, *Rainbow DBS Company LLC*, 22 FCC Rcd 4272 (2007)(waiver of bond forfeiture granted), with *ATCONTACT Communications LLC*, 25 FCC Rcd 7567 (2010)(denied request for waiver of bond forfeiture). Compare *Requests of T-Mobile USA, Inc. and Leap Wireless International, Inc. for Waiver of Bid Withdrawal Payment Obligations*, 18 FCC Rcd 18349 (2003)(waiver of bid withdrawal payments granted), with *Final Default Payment for Auction 35 License CW-BTA127-C1*, 25 FCC Rcd 16888(2010)(provides notice and demand of auction default payment of \$4,841,534.48).

The current measures used by USAC, supplemented by the additional record-keeping and reporting obligations, should suffice. Under the existing rules, carriers receive monthly distributions and, as the Commission notes, USAC recovers support when recipients have received funds to which they are not entitled, typically accomplishing the recovery through adjustments in future disbursements.²⁶ This framework, in combination with annual reports, would offer a workable approach for ensuring substantial completion of deployment projects within the required timeframes. And if there is any instance of fraud or abuse, the Commission can use its forfeiture authority or criminal referrals to punish such conduct.

MOBILITY FUND

ADTRAN previously supported the creation of a separate Mobility Fund, recognizing that in many respects, fixed and mobile broadband are complementary, not duplicative. Obviously, mobile broadband services support mobility, and there is a demonstrated demand for mobile broadband. Less obviously, but just as important, fixed broadband services support traffic volumes that are at least an order of magnitude higher than those supported by mobile services.²⁷ In the *Order and Further NPRM*, the Commission established the Mobility Fund and seeks comments on the details of the implementation of that fund.

The Commission proposes a fixed term of support of ten years, but also asks whether a shorter term would be appropriate.²⁸ In contrast, for the CAF Phase II subsidy program, the

²⁶ *Order and Further NPRM* at ¶ 1112.

²⁷ *See, e.g.*, Additional Comments of ADTRAN, WC Docket 10-90, filed August 24, 2011 at pp. 2-4.

²⁸ *Order and Further NPRM* at ¶ 1138.

Commission proposes a fixed term of support of five years, but asks whether a longer term would better serve the goals.²⁹ ADTRAN believes that in light of the significant capital and effort that will be necessary to deploy broadband in both cases, the Commission should adopt a ten year term of support for recipients under both the Mobility Fund and CAF Phase II.

ADTRAN agrees with the Commission's proposal to adopt mobile broadband performance requirements for Mobility Fund recipients that elect to offer 4G service.³⁰ At the same time, ADTRAN is concerned that the stated minimum speeds of 768 kbps downstream and 200 kbps upstream, applicable at vehicle speeds and throughout the cell area including at the cell edge, reflect only one facet of mobile broadband performance and may drive deployment parameters towards meeting this one requirement at the expense of higher overall performance. Many organizations including 3GPP and ITU-R have established multiple performance requirements for 4G services, including average and cell-edge performance, as well as performance at different vehicle speeds.³¹ ADTRAN recognizes that there is a tradeoff between

²⁹ *Order and Further NPRM* at ¶ 1197.

³⁰ *Order and Further NPRM* at ¶ 1142-1143. Of course, if a service provider wants to use wireless technologies to deploy broadband under CAF Phase II, it will need to meet the performance requirements specified for wireline fixed service – 4 Mbps downstream, 1 Mbps upstream, with latency suitable for real-time applications and services such as VoIP, and with monthly usage capacity reasonably comparable to that of residential terrestrial fixed broadband offerings in urban areas. *Order and Further NPRM* at ¶ 22.

³¹ Report ITU-R M.2134, *Requirements related to technical performance for IMT-Advanced radio interface(s)*; Report ITU-R M.2135, *Guidelines for evaluation of radio interface technologies for IMT-Advanced*; 3GPP, *Proposal for Candidate radio Interface Technologies for IMT-Advanced based on LTE Release 10 and Beyond (LTE-Advanced)*. While these documents refer to technology that is not yet implemented in any of the radio technologies currently marketed as “4G”, they reflect the accepted practice of specifying radio performance over

data rates and mobility, and urges the Commission to adopt requirements for mobile broadband services that more fully reflect the range of performance characteristics of these services as incorporated in the standards-based references cited above. Finally, to the extent that the Commission uses a forward-looking cost model to determining Mobility Fund support – either directly or in establishing ceilings for a reverse-auction – ADTRAN agrees that the Commission should develop a mobile, wireless model separate from the cost model to be used in CAF Phase II.³² The cost structures, revenue sources, and available data for mobile broadband are sufficiently unique that it makes little sense to try to adapt the wireline, fixed cost model to accommodate mobile broadband deployments.

ISSUES RELATED TO IMPLEMENTATION OF CAF PHASE II

The *Order and Further NPRM* also raised a number of questions with regard to implementation of CAF Phase II. ADTRAN continues to support the Commission’s decision to re-purpose the Universal Service Fund to explicitly support deployment of broadband. Under the new Connect America Fund, the incumbent carriers would have a “right of first refusal” to accept a model-determined level of support to deploy broadband to unserved locations in its territories throughout a state. Where the incumbent carrier declines to make that state-level commitment, the Commission proposes to use a reverse-auction to award support.

With regard to any such auctions, ADTRAN agrees that in order to maximize the funds available to support broadband deployment, only a single provider should be subsidized in each

multiple test environments, as well as both over the average cell performance and at the cell edge.

³² *Order and Further NPRM* at ¶ 1175.

area. ADTRAN also agrees that a Competitive ETC that wins such an auction should lose its eligibility to receive the phased-down legacy support under the previous “identical support” rule. It made little sense to subsidize multiple providers in the same area based on the costs of the incumbent provider, and it would make even less sense to allow a competitive ETC to both retain that legacy support and receive an explicit subsidy to deploy broadband.

With regard to eligibility requirements for participation in the reverse-auction, ADTRAN agrees that it makes sense to restrict participation to ETCs.³³ The ETC designation process is well understood, transparent and uncontroversial. As a result of the “pre-screening” performed by the State commissions or the FCC in the ETC designation process, the potential providers’ legal, technical and financial qualifications will have already been established. If the Commission were simply to conduct an auction without any such ETC pre-qualification, then it would need to either conduct a time-consuming (and resource-wasting) review of each applicant before the auction, or conduct a potentially contentious review of the winning bidder after each auction, thereby delaying the award of support (and the deployment of broadband).

ADTRAN also supports the proposal to allow a price cap ETC that declined the model-determined, statewide support to participate in the reverse auction.³⁴ ADTRAN anticipates that an incumbent ETC would have legitimate reasons for declining the state-wide commitment, such as anomalies in some of its territories not fully captured by the model. However, that incumbent ETC could still be able to be the lowest cost provider in some areas where it is an ETC, so

³³ *Order and Further NPRM* at ¶ 1199.

³⁴ *Order and Further NPRM* at ¶ 1201.

allowing the incumbent ETC to participate in the reverse-auction would facilitate the greatest amount of broadband deployment.

The *Order and Further NPRM* also seeks comment on whether there should be any certification of financial and technical qualifications by the reverse-auction participants.³⁵ ADTRAN fails to see what, if any, benefit would be provided by such a certification. The bidder's qualifications would have already been reviewed as part of the ETC designation process. In addition, as ADTRAN discussed above, the current mechanisms (along with new reporting requirements), provides sufficient tools for ensuring that the network is deployed. Moreover, there will be ongoing testing of the broadband network performance to make sure it continues to meet the minimum requirements. Thus, a pre-auction certification would appear to be superfluous.

The *Order and Further NPRM* asks whether there are other steps the Commission could take to encourage smaller eligible parties to participate in the reverse auctions.³⁶ ADTRAN believes it would be inconsistent with the goals of the CAF to provide any sort of "bidding credit" to particular types of entities in the reverse auctions. As the Commission makes clear throughout the *Order and Further NPRM*, the purpose of this subsidy program is to benefit consumers, not to benefit the service providers.³⁷ With the reverse auctions, any such "bidding credit" would directly result in fewer unserved locations obtaining broadband. In the spectrum

³⁵ *Order and Further NPRM* at ¶ 1200.

³⁶ *Order and Further NPRM* at ¶ 1202.

³⁷ *E.g., Order and Further NPRM* at ¶¶ 221, 316, 322 and 510.

auction context, Congress directed the Commission to diversify the distribution of licenses using tools including bidding preferences.³⁸ There is no similar directive in the universal service provisions of the Communications Act.

The Commission seeks comment on whether recipients of support under any reverse auctions should deploy broadband service meeting the minimum standards for model-determined support, or whether some lesser standards should apply.³⁹ ADTRAN urges the Commission to apply the same performance requirements. To the extent that it will be particularly costly to deploy broadband to certain areas, the Commission has adopted a separate Remote Fund -- with presumably reduced performance requirements -- to serve those remote and insular areas. ADTRAN does not believe that additional areas should be relegated to “second class” service simply because the incumbent ETC chose not to undertake the state-level broadband commitment at model-determined subsidy levels. Although the Commission suggests that the reduced performance requirements could still constitute “acceptable” broadband performance standards, the minimum performance standards were set by the Commission by taking into account the requirements for real-time applications such as streaming video, and reduced performance requirements would deny those consumers access to such offerings.

³⁸ See 47 U.S.C. § 309(j)(4)(D)(FCC spectrum auction regulations shall “ensure that small businesses, rural telephone companies, and businesses owned by members of minority groups and women are given the opportunity to participate in the provision of spectrum-based services, and, for such purposes, consider the use of tax certificates, bidding preferences, and other procedures.”). The FCC’s auction authority also specifies that the public interest determinations in allocating spectrum or designing auctions cannot be based “solely or predominately” on the expectation of auction revenues. 47 U.S.C. § 309(j)(7)(A) and (B).

³⁹ *Order and Further NPRM* at ¶ 1204.

In addition, as the *Order and Further NPRM* recognizes, relaxing the minimum performance standards would mean that the Commission would not be making an “apples-to-apples” comparison amongst competing bids. The Commission would need to develop a scoring system to evaluate the proposed services, introducing a measure of arbitrariness and complexity into the bid evaluation process. Moreover, as the experience of other federal agencies with bid protests can attest, the Commission would likely find itself embroiled in post-award litigation over such decisions, thus delaying broadband deployment. ADTRAN therefore urges the Commission to apply the same minimum performance requirements, the same rate comparability standards (rather than trying to factor proposed prices into the mix), and the same deployment milestones into the reverse auctions.

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ADTRAN urges the Commission to move forward expeditiously with the reformation of the universal service subsidy programs consistent with these comments. The Commission should focus on the goal of extending broadband to all presently unserved locations. ADTRAN believes such a course of action will well serve the public interest.

Respectfully submitted,

ADTRAN, Inc.

By: _____/s/
Stephen L. Goodman
Butzel Long Tighe Patton, PLLC
1747 Pennsylvania Ave, NW, Suite 300
Washington, DC 20006
(202) 454-2851
SGoodman@bltplaw.com

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